

# SpotLight

THE PEOPLE  
WHO DRIVE  
OUR SCIENCE  
& TECHNOLOGY

NOVEMBER 2021

LAWRENCE LIVERMORE NATIONAL LABORATORY

VINYL  
VIEW GLANCE



## ALSO INSIDE:

- Living on the Lay of the Land
- Playing Hard is Her Mantra
- Volunteer Spotlights



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## INSIDE THIS ISSUE • • •

Unlike many of his neighbors who grow wine grapes, **Charlie Westbrook** opted for another crop: olives. With his 100-tree orchard, he produces and presses 30-40 gallons of olive oil a year. It's not a brand you can buy in stores because, for Westbrook, he uses it and gives it away as gifts.

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Coming from a musically-minded family, **Glenn Fox's** passion for vinyl records began long ago, and he remembers vividly that it was a moment that kickstarted a journey that continues today.

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Work hard, play harder is **Rebecca Mello's** mantra. Mello gets a rush competing in triathlons, including Ironman-branded ones. Though there is pain during the competition, there is nothing like the feeling coming through the final chute.

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## VISIT SPOTLIGHT ON THE WEB.

We hope you enjoy this edition of *SpotLight*. We'd also like to hear from you. Send us your thoughts and suggestions, whether it's what you like — or even what you don't — about this magazine, or if there is something you would like to see in coming editions. You can reach us via email at [pao@llnl.gov](mailto:pao@llnl.gov).

# Living on the lay of the land

By Anne M. Stark



A photo the Westbrook house from the hill opposite. The house hugs the curve of the hill, and most of the olive orchard .

**F**or Charlie Westbrook, living off the land isn't just a hobby or side interest. It's how he's lived for the last 25 years.

Westbrook, who worked at the Lab for more than 37 years conducting combustion research (he's still a member of LLNL's visiting scientist program), retired in 2005. However, his life away from the Lab has taken on a very different form.

Several years before his retirement, he and his wife Annelle bought about 200 acres of rough hill country 20 miles out on Mines Road, south of Livermore. They drilled a couple of water wells and built a house completely off the grid, all powered by solar.

At some point, after living in their home in where they call 'outland country' (the site is on the border of Alameda and Santa Clara counties), the couple looked around to see if there was anything interesting to do with all this land. "It is very dry and rough, like all the hills around

Livermore, and we are about 20 miles away from the Lab and at an altitude of nearly 3,000 feet elevation," the 76-year-old Westbrook said. "We thought everyone in Livermore grew wine grapes, so we decided to try growing olive trees."

They chose Spanish varieties of olives (Annelle was a Spanish major in college and enjoyed the local cuisine so that helped them select the olive variety) and planted a little more than 100 seedling trees. After about four years, they started producing useful amounts of olives, and they have since acquired an olive press and harvest olives and make olive oil every November.

## Harvesting and production

To build the orchard, Westbrook and his wife first planted 20 olive trees close to their house and monitored whether they would survive in the Livermore weather. They did, so they ordered 100 seedlings and kept them in the flat for a month. They hired a bulldozer operator to terrace

the hillside, where Westbrook and Annelle hand planted all the trees. In the 15 years since they planted, they've only lost one tree.

Watering was another issue.

They already had one water well drilled for their home. For the orchard, they installed another water well further down the hillside, closer to the trees. With a series of various sizes of pipe installed, Westbrook hand-waters the trees once a week. Because the water well only holds so much, it takes three hours to water all 100 trees.

To harvest, the couple invites friends who invite friends, and their two daughters do the same, all helping out on a single weekend in November "and we make very good olive oil," Westbrook said. They use a press that looks like an old Volkswagen bus, where they pour the olives in what would be a carburetor and the oil comes down at the tailpipe-looking section into buckets. From there, they let the oil sit for a couple of





months before they run it through cheesecloth to separate any solids and then bottle it.

“I warn people that you have to press olives the day you harvest them for best results,” he said.

Their output is 30-40 gallons of olive oil per year, which they use and give away. “We’re not going to get rich and we’re not going to sell it,” Westbrook said.

### **From the ashes comes a phoenix**

Last year’s crop hit a hiccup. In August 2020, the Westbrook property was in the path of the SCU Lightning Complex Fire that charred 390,000 acres and threatened the communities of Livermore and Pleasanton. Westbrook’s home was spared, but he and Annelle had to evacuate and live with their daughter’s family for an entire month before they returned.

“We’ve learned and been beat up by the all the forces of nature: water, ice, snow and fire,” he said.

Upon return, Westbrook said the area looked like the surface of the moon, with little vegetation and scorched land. He was fortunate though because earlier in the year, he had cleared brush a couple of hundred feet around the house, so it was spared. “The fire took everything in sight but ignored the house,” he said. A well that provided water for the house was damaged and had to be repaired before they could return home.

The orchard was another story: “The olive orchard survived but one of three rows of trees was close enough to the fires to get a bit ‘singed,’ but we are expecting a nearly normal crop this November, and the trees all have small green olives already growing,” Westbrook said.




Top left: Westbrook examines his olive oil press. Bottom left: The finished product — the “Olivarancho” labeled olive oil. Right: Westbrook and his son-in-law, Sherman, stand by the fruits of their labor on a picking day.

# WAXING NOSTALGIC

GLENN FOX TALKS ABOUT WHY HE COLLECTS VINYL, AND WHY IT'S COMING BACK WITH A VENGEANCE

By Jeremy Thomas

A photograph of Glenn Fox, a man with a grey beard and glasses, wearing a blue and white plaid shirt. He is holding a large, clear vinyl record in front of him with both hands. The background is a bookshelf filled with books.

In the 50 years he's been collecting vinyl records, Glenn Fox's musical odyssey has taken him from rock, punk and heavy metal to the more experimental and avant garde genres — spiritual jazz, Norwegian progressive rock, dub techno and Japanese rock.

C

oming from a musically minded family, Glenn Fox's passion for vinyl records began when he was just eight years old, while shopping with his older sister Joanne. Like most memories connected to music, he recalls it vividly — it was a moment that kickstarted a journey that continues to this day.

"My sister was 17 at the time and she was very musical, creative and artistic. She would come in and reorganize and stylize my bedroom; she'd put posters up on my wall — bands or blacklight posters — installed blacklights in some of my lamps and put on a record on my record player before she'd allow me back in.

"One day, she took me to our local Payless (department) store and said, 'I want you to buy some records,' and the first ones she bought for me were Sly and the Family Stone's 'Greatest Hits' and Black Sabbath's 'Masters of Reality,'" he recalls. "That's where it all started."

Fox's bedroom shelves soon became home to other albums he received or borrowed from his sister: The Beatles' "Abbey Road," Carole King's "Tapestry," The Jackson 5's "ABC" and The Temptations' "Psychedelic Shack."

In the 50 years since then, Fox (associate director for Physical and Life Sciences) "never took a break" from collecting music. His vinyl and CD collection has grown to about 8,000 albums, each one meticulously catalogued in an ever-expanding database. One of his earliest acquisitions, David Bowie's glam rock masterpiece "Ziggy Stardust and the Spiders from Mars" still ranks as his most cherished "desert island" record, because it contains songs he played with his first junior high school rock band.

"Music — both playing instruments (piano and guitar) and collecting records — has been a mainstay of my life and self-expression. I'm very sentimental about music and often, music and records tie back to something in my life," Fox says.

While not all of his extensive collection is on vinyl — he owns several thousand CDs and a smattering of cassettes — on wax, the music is "more immediate."

"If I could trade every one of my CDs for vinyl, I would," Fox explains. "For the really important albums in my life, I'm slowly swapping them out."

## The vinyl revival

Nearly discarded by an entire generation as CDs, MP3s and finally, streaming services took over the marketplace, vinyl records are experiencing a resurgence. Sales of LPs in the U.S. outpaced CDs in 2020 for the first time in four decades, driven by nostalgic music buffs who grew up in the '80s and '90s and millennials starving for a more tangible, tactile listening experience that digital and streaming media can't replicate.

And the rediscovery shows no signs of slowing anytime soon. Vinyl accounted for 27 percent of album sales in the United States last year, according to industry analyst MRC Data, continuing a steady climb that has spanned 15 years. Fox says for him, the vinyl revival boils down to several distinct factors.

"What I don't like about digital music is that you don't own anything, it's just a file that sits on your computer or in the cloud," Fox says. "When you buy a vinyl album and you pull it out its cover, you can read the liner notes while the music is playing, and that first spin of a new album or artist in its entirety provides an experience other formats don't provide — that's what I love about it. For me, the sound of an LP is warmer and more immediate. It's the experience and it's the sound."

Though Bowie and rock remain at the top of the list, Fox's musical tastes span nearly all genres. The shelves at his rural Brentwood home are stuffed with box sets, LPs and singles from bands like The Kinks and Neutral Milk Hotel, to jazz great Lee Morgan, to country music legend Merle Haggard (inspired by his youth spent working on a ranch), funk and soul like Syl Johnson and metal acts like System of a Down. Spurred on by his hobby, the journey has taken him to the far reaches of the musical universe: spiritual jazz, Norwegian progressive rock, dub techno and punk and Japanese avant-garde rock to name a few.

"Music opens up your world and teaches you new perspectives — how do other people view their world through their art and music," Fox says. "That was really critical for me, especially growing up in a small town. If you're willing to listen, you're going to learn something new."

## Spin the black circle

As a teen in Medford, Oregon in the 1970s, the mecca for absorbing new music was the local record store Sister Ray Records. It was where Fox and his friend and “musical brother” Duane (last name withheld for privacy), could be found hanging out, spending their hard-earned dollars listening to vinyl and getting new recommendations from the store staff. Punk soon arrived, and Fox dove in headfirst, ordering imports from the U.K. — then the only way to get the records since they weren’t available in the U.S. yet. The Jam’s “This is the Modern World” “changed my life,” Fox says, followed by the Sex Pistols and The Clash.

“Growing up when and where I did, music is how I learned about the world,” Fox says. “All of these albums were speaking to me and teaching me things I’d never experienced or thought about. British punk rock was the first genre that really had a huge effect on me in that way, especially as a 15- or 16-year-old. I was able to relate to it.”

As a teen, Fox and Duane would take long road trips from Medford to Seattle or Portland to visit record stores like Tower Records. They taped their albums so they could play them on their portable cassette decks and “discussed or argued about music all the time,” Fox says. “We both spent all our summer job money on records — we were complete enablers for each other buying more vinyl.”

Through the decades, Fox and Duane continued their musical friendship and quest, sending each other recommendations and egging each other on to buy more albums as their tastes evolved. Taking advantage of the accessibility of artists in the Internet Age, they also directly connected with independent artists and smaller record labels through email.

For Fox, the ritual of removing the vinyl from its sleeve, placing it on the turntable, lowering the stylus down on its grooves and bathing in its warm tones is inexorably tied to the past. The album artwork, liner notes and “more immediate” sound also provide an experience that other formats can’t match, Fox says. Pictured is a limited edition “splatter” vinyl copy of an extended play (EP) record by the rock band The Flaming Lips.

When Duane died in 2019, Fox began helping his widow organize and catalog his friend’s massive 15,000-piece music collection. For the past two years, Fox has traveled to Oregon multiple times to help get the collection ready to sell, with all the proceeds going to Duane’s daughter’s college fund. Fox says although the process has been difficult, he’s glad he can help the family and share in the collection one final time.

“We grew up together (collecting), so there was that visceral excitement of talking about music and records,” Fox said. “Duane’s passing left a big hole in my life. While our relationship was centered around music, having someone to share it with was just as important — he was one of my best friends since the age of 14. In a way, I still feel like he’s still teaching me about music through some of the albums that I’m finding in his collection.”

Dropping his turntable’s tonearm down on a copy of “Batsumi,” an obscure cape jazz album by a South African outfit of the same name, Fox recalls the first time he heard it, at a London record shop called Honest Jon’s. He calls the store one of his favorites, due to its large and unique selection of obscure and hard-to-find albums.

For Fox, record stores have always been an avenue for music discovery. It was from frequenting stores like Django Records and Tower Records in Portland during college where he was introduced to a vibrant live local music scene. It was through another record store while a postdoc at Northwestern University in 1990 where he got his first taste of Seattle bands like Pearl Jam, Nirvana and Alice in Chains.

In the ‘90s, as vinyl began to wane, Fox started buying CDs, and getting hooked on jazz — Chet Baker, Art Blakey and Sonny Rollins to name a few — before graduating to the more freeform

expressions of the genre, the avant garde and spiritual jazz that now features prominently on his record room shelves.

“As a music collector, the worst thing for me is to be bored; to listen to an album and it sounds like dozens of other artists or bands I’ve heard before,” Fox says. “New music, new genres bring an excitement of the unknown. It’s a continuing development. When I hear a new record or artist, I feel they’re trying to tell me something about their world, or of their experience — I hope it evokes an emotion. I find for myself, if I am still thinking about an album a day or two after I listen to it, it’s usually a pretty good album. But then again, there’s nothing wrong with putting on a great album and turning it up really loud.”

These days, Fox buys most of his records online from websites like Discogs.com, but still visits physical stores such as Oakland’s Groove Yard, Berkeley’s Amoeba Records or Stranded Records in San Francisco. He tries to visit local record stores while traveling too — like Bent Crayon Records in Cleveland, Reckless Records in Chicago or Albums on the Hill in Boulder.

While many collectors enjoy the thrill of the hunt, Fox says he’s not “quest driven,” though he does have his grails — The Beatles’ notorious “butcher cover” from their “Yesterday and Today” album and currently, a series of spiritual jazz compilations from the Jazzman Records label.

In addition to his faithful cataloguing efforts — a “sub-hobby of the hobby”— Fox digitizes all his records and scans their covers so he can have the music and the art at his disposal wherever he goes.

Fox said he intends to someday pass on the collection on to his daughter, and along with the music, impart the importance of focusing on an entire record from start to finish.

“A record is a story,” Fox says. “Popping into (streaming music service) Pandora to listen to one song is fine but for me, taking the time to listen to an album, they’re telling stories. There’s music out there for everyone, and it speaks to everyone in a unique way.”



# REBECCA MELLO PLAYS HARDER

By Michael Padilla

**R**ebbecca Mello says she lives by a simple rule: work hard, play harder.

Mello, who works in LLNL's Weapons and Complex Integration Directorate, has been competing in triathlons since 2017 and says the best feeling for her in competing is right before the finish.

"For the Ironman-branded triathlons — the best feeling is in the chute," Mello said. "The rush of adrenaline replaces all of the pain with good tingles. The people cheering is a heartfelt inspiration and you can hear them. For that one moment — everything is good. It doesn't matter about the blisters on your feet or the pain in wherever it may be — it is literally all good feels."

## It all started with a bootcamp

Mello joined a bootcamp in 2017 and was inspired by others around her. She had the good fortune of many people advocating for her along the way. During that time, her birthday was coming up and her husband asked her what she wanted to do for her birthday. She told him she wanted to do the local "Tri-for-Real" sprint triathlon at Shadow Cliffs.

"My birthday was only a few days away," she said, adding that her husband, not one to discourage her, kindly said that people trained for triathlons. "I told him that I had been working out and wanted to see where my fitness level was at," she said.

This was the start of something very new in her life. So, on Sept. 17, 2017, she finished feeling incredibly strong just using her regular workout gear and her trusty ol' mountain bike.

She also credits her doctor for advising her to become more active and drop a couple of pounds to help deal with health issues. She

Mello says she is grateful to be healthy to compete and grateful to the people around her, especially her husband.



**Top: The finish of the 2018 Ironman 70.3 Santa Rosa Vineman. From left: Kevin Eiden, Nate Eiden, Valerie Eiden, Julie Cox, Rebecca Mello, Glenn Cox, Elwood Mello, Cindy Kelley-Clark and Jamie Guillen.**

**Left: Mello is all smiles following the completion of a competition.**

**Right: Mello's favorite triathlon that she has participated in (repeatedly) is the Bass Lake Triathlon. It is held in a smaller community near where she grew up and is Olympic distance.**

“I have been told by people close to me that I have two modes: zero or 11 out of 10. I sometimes wish that I could find that middle ground and just keep it even, but that is simply not who I am — it really is all or nothing.”

— Rebecca Mello



## FUN TRIATHLON FACTS

- **SPRINT:** 750 meter (0.46 mile) swim, a 20K (12.4 mile) bike and a 5K (3.1 mile) run
- **OLYMPIC:** 1.5K (0.93 mile) swim, a 40K (24.8 mile) bike and a 10K (6.2 mile) run
- **HALE/70.3:** 1.2 mile swim, a 56 mile bike and a 13.1 mile run / 70.3 miles long
- **FULL:** 2.4 mile swim, a 112 mile bike and a 26.2 mile run / 140.6 miles long

also credits her father who is a legend in some circles; for her entire adult life, her father had been doing ultra-marathons.

“I had crewed for some of his local races,” she said. “I always thought his runs were so extreme. I had not tested my fitness, mental strength or grit to do the things he has accomplished, but can see how being exposed to his activities has skewed my judgement and perception of what is ‘hard.’”

She now enjoys the challenge of training for something hard and completing it and finds it fascinating that draining herself completely can re-charge her batteries.

### People give her pep

Her biggest highlight in competing in races are the people. “It could be the people volunteering during the races or the participants themselves, but I have met some of the most interesting and giving people in my life during triathlon races,” she said.

During her first 70.3 (a half Ironman), her co-workers surprised her in the bike-to-run transition. Her co-workers had signs with pictures of her face on sticks. Mello walked over to the rail to give them a hug and thanked them for being so supportive of her ambition to do triathlons.

In July of this year, she participated in the Inaugural Salem Oregon 70.3 triathlon. As can happen during inaugural events — there were some logistical challenges. She hopped out of the car to get her transition set up and get ready for the swim. There were approximately 2,000 participants — which in 2021 is a lot of people.



A rite of passage — Mello holds her bike high at an Ironman event.

“I was never able to find my husband before the start,” she said. “But this wasn’t my first rodeo — I got everything ready in the transition and got in my wetsuit — I was one of the last people out of the transition area and I started my 1.5 mile walk to the swim start. I had roughly 2,000 people in front of me on a bike trail (it was pretty crowded).”

As she crested over the bridge as far as she could see the trail — there were triathletes walking. There was steam coming off of the people and it was an incredibly peaceful moment.

“All I could hear was the beat of my feet walking and see the fresh dawn of the beautiful morning: lush green, full of those triathletes and peaceful,” she said.

Prior to the start of the pandemic, she had completed a few 70.3 triathlons, which is considered a half, and she had made her mind up to attempt her first full triathlon. She had an aggressive training plan and had signed up for the Santa Rosa Ironman, to be held in July. She was well into her training when the shelter-in-place started. When it started, there was no indication whether the race would go on, but she wasn’t really that concerned. In the scheme of everything going on in the world, she knew it wouldn’t be a priority.

“I felt slightly disappointed when the event was canceled, but completely understood,” she said. “It was the beginning of the shelter-in-place and I gave my body a rest. When I started back training, it sure felt good.”

“Completing a triathlon is all about being grateful to be able to complete a triathlon,” Mello said. “I’m grateful to be healthy to compete, grateful for the training, grateful to the people around me that allow me to dabble in this sport — especially my husband.”

# Brighter Holidays

## LEADS TO BRIGHTER DAYS

By Carrie Martin



Since 1989, LLNL employees have generously donated gifts and food to local families in need through the Brighter Holidays program. In 2020, despite the global pandemic, the Livermore Laboratory Employee Services Association (LLESA) and employees from organizations across the Laboratory amped up the giving with a variety of opportunities that had a positive impact on the community.

Due to the overwhelming success of this program, the giving and volunteer opportunities now continue all throughout the year through LLESA's [Brighter Days campaign](#). Brighter Days is an extension of

Brighter Holidays with the goal to help the community through acts of kindness not just during the holidays but throughout the year. As part of Brighter Days, LLESA periodically coordinates Labwide charitable programs and shares employee recommended giving opportunities throughout the year.

To recommend a giving opportunity, employees may visit the [LLESA Brighter Days campaign website](#) and submit details for consideration.

For more information about Brighter Holidays or Brighter Days, please contact [Colin Yamaoka](#) at [yamaoka1@llnl.gov](mailto:yamaoka1@llnl.gov).

### HOME Campaign kicks off giving season

The Lawrence Livermore National Laboratory (LLNL) Helping Others More Effectively (HOME) Campaign is now underway and runs through Dec. 3.

Now in its 47th year, HOME is the Laboratory's annual employee charitable giving program, where employees may donate to their favorite non-profits through payroll deduction. The benefit of donating through HOME is that Lawrence Livermore National Security (LLNS), which manages the Laboratory for the U.S. Department of Energy's National Nuclear Security Administration, adds an extra \$1 million in prorated funds to amplify employee donations, increasing the contribution value.

In 2020, despite the global pandemic, LLNL employees, along with LLNS, donated more than \$3.9 million to charitable organizations. This was the highest dollar amount raised in the history of the HOME Campaign. Help our local communities during these challenging times by donating through HOME.

### In FY21, Brighter Holidays offered 15 donation opportunities and four blood drives. The donations and the impact Brighter Holidays had in the community:

- \$9,389 in monetary contributions to a variety of non-profits
- 2,000 pounds of food donations
- 100 handmade quilts
- 312 holiday cards sent (as part of a holiday card project)
- 324 units of blood collected

### The organizations benefitting in FY21 (note: the organizations were selected based on employee recommendations):

- Goodness Village
- Tuesday's Children (children impacted by 9/11)
- Running Strong — Native American youth
- Valley Humane Society
- Open Heart Kitchen — virtual food drive
- Tri-Valley Haven holiday program
- Alameda County Fire Department toy drive
- Adopt a Foster Child
- Adopt a senior — senior support program of the Tri-Valley
- Children's Hospital and Research Center of Oakland
- Intertribal Friendship House in Oakland
- Livermore Giving Tree
- Valley Bible Church food pantry



TOGETHER AT A DISTANCE  
RUN FOR HOME  
2021  
HELPING OTHERS MORE EFFECTIVELY  
LAWRENCE LIVERMORE NATIONAL LABORATORY

"Please join us in this powerful expression of our commitment to our local communities and others in need. Your donation, no matter what the amount, makes a difference."

Thank you for giving."

-Bruce Hendrickson  
Associate Director of Computing

# Sharing Knowledge ON A GLOBAL SCALE

volunteer SPOTLIGHT

By Ben Kennedy

**F**or Prem Attanayake, a lifetime of engineering experience is not just a benefit for LLNL: it's helping communities around the world, as well. At the Lab, he provides the Environmental Restoration Department (ERD) with support for special projects, mentorship for professionals and review of documents for technical quality. As a volunteer for Engineers without Borders, he consults on critically important infrastructure projects taking place thousands of miles away.

"It makes me feel good to give something back," he says. "That's the main reason. I have done things in the past to help various causes — this is a continuation of that."

In 2021, Attanayake has been helping a small community in central Ecuador replace their shallow, contaminated wells for drinking water with deeper wells that feed water to a treatment facility and then onward to the people. While the pandemic has prevented travel, he hopes to make the trip sometime soon.

Additionally, Attanayake has remained involved with his native Sri Lanka. In the early 1990s, he gave free seminars for several months to share his groundwater engineering knowledge, and he started an initiative to collect and ship used science and engineering textbooks to university libraries there. To date, he has sent more than 500 books to Sri Lanka.

But his giving spirit is not limited only to engineering. "Even here," he says, "my son and I used to volunteer at the animal shelter, just to support the local organization. It's just wanting to help something, some cause."



*"It makes me feel good  
to give something back."*

— Prem Attanayake

Prem Attanayake, pictured here with a drill rig, is a volunteer with Engineers without Borders.



## volunteer SPOTLIGHT

# BUILDING

# Hope

Phil Arzino helps others in a meaningful and lasting way

By Michael Padilla

Phil Arzino says he does not think his motivation to helping individuals is unusual.

"I believe that as a human race we all, with rare exception, want to help others in a meaningful and lasting way," he said.

Arzino helps equip individuals to become Presbyterian lay pastors, also known as commissioned lay pastors (CLPs), who are then deployed in a variety of fields including efforts to end involuntary homelessness in the Bay Area and to provide food banks to those in need.

The CLPs are ordained elders in the Presbyterian Church USA who help lead efforts to end involuntary homelessness, manage food pantries, organize efforts to stop sex trafficking, develop multicultural churches and leadership centers and more.

"These are often individuals like me who have chosen other career paths and are taking on these callings either as a volunteer, bi-vocationally or sometimes as a new or post-career path," Arzino said. "There is usually not much money involved so the motivation is intrinsic."

CLPs take 10 hours of seminary-level instruction per month — not counting study and assignment time — for 12 months, are mentored by ordained pastors and undergo examinations, nominations and approvals to become commissioned. The lay pastors also have continuing education

requirements, annual reviews and a recommissioning every three years. Arzino leads a team to organize and make all of that happen.

### Shepherding, encouraging others to help

"I help to shepherd and encourage the students through the process," he said, adding that there are several paths to help end involuntary homelessness in the Bay Area.

Some of the CLPs are helping those efforts in a variety of ways through the First Presbyterian Church of Hayward. The senior pastor and the CLPs he is supervising have envisioned a networking model that involves temporary to more permanent solutions and takes an approach of partnering with cities, counties, other churches, businesses and community volunteers to offer a variety of sheltering and housing options, accompanied by social and support services.

The Hayward team has developed an infrastructure and a non-profit organization called Firm Foundation Housing that has already built several tiny home communities in the Bay Area and are moving individuals over time to more permanent housing solutions.

One creative nuance was the recent building of several tiny homes behind Fairmont Hospital in San Leandro to provide temporary housing along with nursing and social service support to homeless individuals being discharged from

surgery or serious illness to improve the likelihood of recuperation.

"It is vital to value the individuals that we are serving above the services that we are providing," he said. "We quickly learn that we have more commonalities than differences and will develop a greater capacity to love one another."

### Building homes abroad

In addition to the work Arzino does in the Bay Area, he has helped build houses for those in need in Mexico. He has worked with teams over several years to build 15 homes and a six-room schoolhouse. In those efforts, local organizations in Mexico identified who should get homes and sent plans and specifications.

While in Mexico, Arzino helped assemble teams, purchase supplies, brought the tools and did the work. The teams always spent time building relationships with the recipient families, often working alongside them and making some modifications to the plans to meet a special desire.

The teams wired most of the houses for electricity but none of them had plumbing, as there was no infrastructure for running water. Many of those trips



Over the years, Arzino has helped build 15 homes and a six-room schoolhouse in Mexico.

involved taking high school students during spring breaks for 7-10 days.

He said the most memorable part of volunteering is seeing the amazing work that is accomplished by the CLPs who complete the commissioning. "This is far beyond what I could have imagined or accomplished myself," he said.

# Nurturing

students' careers through mentorship

By Steve Wampler



uring the past nine years as a student at UCLA and then as an engineer, Rajani Bansal has mentored about 35 college and high school students.

And she doesn't plan to quit helping students anytime soon.

"I think I want to continue to mentor students for the rest of my life. It's been a wonderful experience," said Bansal, who has worked at LLNL for about 21 months as an environmental engineer in the Environmental Restoration Department.

During her sophomore year of college in 2012, as she was earning her bachelor of science degree in chemical engineering from UCLA, Bansal started mentoring college students.

"It's been an awesome experience. I love working with the students because honestly, it's not just me giving, but I also receive as I learn so much about myself from these mentoring programs.

"It's also very rewarding to see how the students progress and move into the work world and to see how the advice I've given them has helped them with their first jobs," Bansal said.

During the summer of 2020, several students whom Bansal was mentoring told her how disappointed

they were that they wouldn't have the opportunity to serve on internships because of COVID.

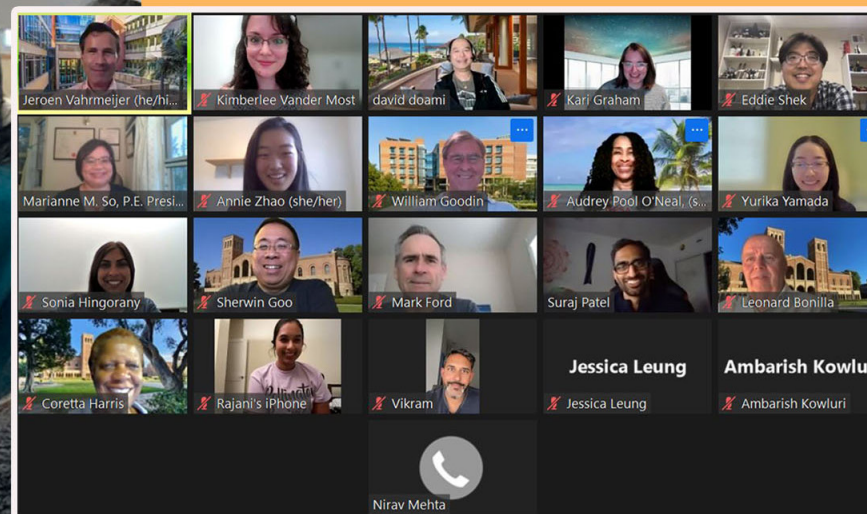
In response, Bansal contacted the American Institute of Chemical Engineers (AICE) chapter at UCLA and set up a 10-week summer seminar simulated internship program for six students under the auspices of the AICE UCLA chapter.

"Most of the students worked so hard and they asked questions right and left. I felt humbled that they wanted to do this internship and considered my work experience to be valuable to them," Bansal continued.

Earlier this year, Bansal was picked to be the keynote speaker for "WOW, It's Engineering," an event where girls from third grade and up learn more about STEM (science, technology, engineering and mathematics). It is sponsored by the UCLA Society of Women Engineers.

"I was very, very honored that they thought my past work experience would be helpful to the girls attending the conference," she said.

Mentoring and helping students are efforts she plans to continue.



Far left: Lab environmental engineer Rajani Bansal demonstrates how to use environmental engineering equipment to students at the Tri-Valley Expanding your Horizons event in February 2020 that took place at Dublin High School prior to the pandemic-related shutdowns.

Inset: During the summer, the UCLA Engineering Alumni Association, including LLNL's Rajani Bansal, met to recap what has happened since their previous meeting, plan alumni engagement events and receive updates on student project proposals that are submitted for funding, among other tasks.

John Perkins

**EMPOWERS**

students to excel in  
advanced placement physics

By Michael Padilla

**A** couple of years ago, LLNL physicist John Perkins wanted to share his passion for physics so he began reaching out to schools in the Bay Area including Oakland, San Lorenzo and Richmond to help schools and students.

"It was an individual initiative of mine to reach out to schools with low test scores," Perkins said. "I wanted to tutor students in advanced placement (AP) physics and I knew that I could make a difference in improving test scores."

Perkins said private tutors are too costly for many families so volunteering his time would mean parents or guardians do not have to worry about cost. He wanted to make sure teachers and parents knew he was doing it at no cost.

Perkins began working with Susan Johnston, physics and calculus teacher and Science Department co-chairperson at Livermore High School, who was looking for a tutor to help students in AP physics that are equivalent to first-year university courses.

Johnston said she was grateful that Perkins agreed to help the students and that she

appreciates that Perkins gives up his evenings and weekend time to help the students.

"What makes a difference to the students is that John has a few things in his corner," she said. "He is passionate about physics, he has the expertise to look at 'big-picture physics' so that he can nail down almost any tough problem to simple laws of physics and he can explain well to the high school students."

Johnston said the students appreciate his ability to make problems that really seem difficult rather simple.

"He is able to work with a diverse group of students and he is also organized," she adds. "John requires the students to be active learners in their education. He does this by teaching them problem-solving skills and by requiring them to attempt all problems on their own before he works with them on the problems."

His tutoring assistance has paid off. Last summer the AP exams scores showed the Livermore High School students did very well. The AP physics passing rate was at 90 percent and

Inset: John Perkins and Richmond High School AP physics class and teacher James Kealey.

the participation rate was 95 percent. The most common score was five (on a scale of 1-5). In addition, several in the group scored a 5/5 on physics and calculus.

Johnston said several of the students said that the review and tutoring Perkins did with them was instrumental in their success.

"John gave them the inspiration to study more physics with his passion for physics and ability to explain topics both with interest and simplicity," she said.

"What I liked about it is that students really want to be there," Perkins said. "Even when COVID-19 hit, we figured out a way to continue tutoring. Although there is nothing like working out problems out on a blackboard, tutoring via Zoom has worked out."

Perkins said he finds volunteering very rewarding to give back to the community and to do something tangible. His advice to those who are interested in tutoring is to have patience and know that you will be making a difference.

*"The primary reward of tutoring is knowing that you are helping others and it makes you feel good. You get more joy out of life helping others."*

— John Perkins

"You have to realize you aren't talking to Lab physicists. Students are still processing; take it slowly and carefully compared to Lab colleagues," Perkins said. "You need to slow down and you need to learn how to accommodate the needs of the students."

### How to get involved in STEM outreach

As a member of LLNL's Design Physics Division, Perkins said he highly recommends anyone from his group and from the Lab to volunteer their time to serve as a tutor. Perkins said there is a vast untapped resource at LLNL and he hopes those who are able can volunteer and help students.

"We have some pretty talented scientists who should become STEM volunteers," Perkins said. "It's important that we continue to help students."

Joanna Albala, manager of LLNL's Science Education Program, said the Lab has started a pilot tutoring program with Livermore Valley Joint Unified School District at Livermore High School. Currently there are three additional LHS teachers and six LLNL staff who worked with students this last trimester.

To learn more, check out the [LLNL STEM Outreach Program](#).

# A PASSION TO SERVE

volunteer SPOTLIGHT

By Carrie Martin

**I**rsten Sprott, an administrator/technical release representative in the Public Affairs Office at LLNL, has a passion for giving through service. She helps others on a regular basis both on and off the job. Volunteering for nonprofit charitable organizations for more than 20 years, she found a way to fuel her passion and give back to the community through LLNL's Brighter Holidays program.

Brighter Holidays, which started in 1989, is a grassroots program that provides food and gifts for the less fortunate during the holiday season. Sprott has served as the Brighter Holidays directorate liaison for the Director's Office (DO) for the past 17 years. She coordinates the adoption of families for the departments within the DO including for her own department, Public Affairs.

"Brighter Holidays is a wonderful program," Sprott said. "The holiday season can be a difficult time for many families both financially and emotionally. Brighter Holidays offers employees the chance to contribute in some way and help those in need. Most people don't know where to go or how to help, Brighter Holidays provides an avenue to give back."

Sprott takes responsibility for the whole process from start to finish. From reaching out to local agencies to find families in need and then working with the family to get their needs lists and wish lists. She then creates gift tags to place on the tree on display in the building lobby. Once the wrapped gifts are placed under the tree, just before the holiday, she loads them all up and personally delivers the gifts to the family at their home. This has shown Sprott first-hand the impact of employees' generosity to this program.

"In 2017, we adopted two families who lost their homes in the Santa Rosa fires," Sprott said. "These families lost everything in the fire. They were under a tremendous amount of stress dealing with trying to find a rental home, insurance issues, etc. It was so amazing to deliver gifts to these families during this time and make their holiday special."

Some families in the program have never experienced Christmas the way that most families do. Sprott recalled that in 2019 a family was adopted consisting of a single mom, her newborn baby girl and her seven-year-old daughter. "Due to the generosity of Lab employees, in addition to gifts, we were able to deliver a Christmas tree and set it up with ornaments and lights. The family had never had a tree before. When we walked in with all the gifts, the look on the little girl's face was priceless. She had never seen so many presents."

Employees can help by getting involved not only during the holidays but all year long. There are many opportunities to help, one of which is through the Livermore Laboratory Employee Services Association's (LLESA) Brighter Days. The Brighter Days campaign is an extension of the Brighter Holidays program and helps the community through acts of kindness throughout the year. As part of



**Top left: Sprott and her daughter Taylor volunteering at the annual Night to Shine event, a prom experience for those 14 and older with special needs.**

**Top right: Sprott and her daughter Taylor volunteering for the National Charity League at Open Heart Kitchen.**

**Bottom right: Sprott and her kids Nick and Taylor volunteering at the Exceptional Needs Network respite camp for children with special needs.**



Brighter Days, LLESA periodically coordinates Labwide charitable programs and shares employee recommended giving opportunities throughout the year. (See pages 16-17.)

Outside of work, Sprott's main passion (in addition to exercising) is volunteering for charitable organizations. "Volunteering is so important because it gives me an opportunity to make a difference and give back. Along the way I get to meet new people and be a part of a community. Volunteering gives me a sense of purpose."

Since 2001, she has served as a board member/volunteer for the Exceptional Needs Network (ENN), a non-profit that provides camps for

special-needs children.

"It was my involvement with ENN that really ignited my passion to volunteer. Seeing those

kiddos having so much fun at camp and their parents getting some well-needed respite made me so happy. Knowing that I played a part in that made me feel so good I wanted to just keep doing more and more."

She also volunteers for the Taylor Family Foundation (since 2002), whose mission is "to preserve the wellness and enhance the quality of life for children in Northern California living with life-threatening and chronic illnesses, developmental disabilities and youth-at-risk through unique therapeutic experiences and support."

Sprott is one of the founding members and past board members for the National Charity League, Livermore chapter which was started in 2014. The National Charity League is a nonprofit organization that provides community service and volunteering opportunities for mothers and their daughters.

Since 2017, she has volunteered for the Tim Tebow Foundation's Night to Shine, Tri-Valley, an unforgettable prom night experience for special needs ages 14 and older. She collects

prom dresses for participants and serves as a buddy for one special attendee.

Her most recent volunteer experience (since 2020) is delivering meals for Culinary Angels, a non-profit organization that provides healing, nutrient-rich meals to people going through a serious health challenge.

Through her involvement and dedication, Sprott has instilled a charitable and giving spirit into her family as well. "Both of my kids are very involved with ENN because they grew up seeing how much fun the kids were having through the experience. When they were old enough to start volunteering, they were all in, without me even asking. They asked me."

She and her daughter Taylor were both involved with the National Charity League, before she went off to study nursing in college. "We volunteered hundreds of hours together."

Sprott has demonstrated to her fellow LLNL employees what it means to serve others.



# PULLING TRIUMPH FROM TRAGEDY

By Ben Kennedy

**S**haun Stephenson joined his brother Dion in the U.S. Marine Corps in the 1980s, inspired by his example and his family's long tradition of military service. While both men were deployed during the 1991 Gulf War, Stephenson's brother was killed in the Battle of Khafji, the first major ground engagement of the war.

"General Gray, the Commandant of the U.S. Marine Corps, asked me what I wanted to do," Stephenson said. "I said I wanted to go back to the Gulf and avenge my brother's death." But the survivor policy prevented a fallen Marine's sibling from returning to combat. Stephenson escorted his brother's remains back home to Utah and soon went on to the U.S. Naval Academy, where he achieved his dream of playing football for Navy. He continued to serve in the Marine Corps thereafter, achieving the rank of Captain, but never losing sight of Dion's example.

Today, Stephenson is the Military/Veteran Strategic Outreach and Recruiting Program manager focused on recruiting his fellow veterans to continue their national service at LLNL. Beyond that, however, his volunteer efforts honor his brother's memory and spread his values to a new generation. His family gives a scholarship at Shaun's and Dion's high school alma mater to students who exemplify Dion's principles of philanthropy, leadership and patriotism. One recipient even connected him with an initiative that makes commemorative books and videos for veterans, which has taken him back to Kuwait to see firsthand the incredible progress and growth the country has made following the Gulf War.

Stephenson also travels to speak on character and leadership development in high schools and at veterans' events. With

so many distractions available today, he says, modeling and teaching principled leadership can make a critical difference with youth and young adults.

"I want to be able to provide them with a foundation of character and leadership — through tools, resources and principles that help them make a positive contribution to society," he said. "At the end of the day for me, you know you've had a good day when you've served somebody other than yourself."



In addition to his work at the Lab helping veteran recruitment and speaking about character and leadership, Shaun Stephenson finds the time to coach youth football — drawing on his years playing for Navy.

*"Life is not about you. Life is about what you do for other people. It's one of the values my brother taught me."*

— Shaun Stephenson

## volunteer SPOTLIGHT

# In the heart of OAKLAND

*"It's the friendliest  
place I've lived."*

– Michael Taffet

By Jeremy Thomas

Michael Taffet's heart may belong to Brooklyn, but he's found a home in one of Oakland's most historic neighborhoods.

West Oakland's Oak Center boasts about 9,000 residents and dozens of Victorian-style homes, many of them built prior to 1900. The neighborhood is easy walking or biking distance to downtown Oakland, Middle Harbor Park, the Port of Oakland and the Bay Bridge and contains within its boundaries a wealth of cultural activities and parks.

"It's beautiful, there's a lot of old houses that are well-maintained. We have some nice parks in the area. We're in the center of the Bay Area — we're right in the middle of everything. It's a really nice community."

Since moving to Oakland in 2004, Taffet, a hydrogeologist at LLNL, has been a member of the Oak Center Neighborhood Association (OCNA), serving as the group's chairperson for the past 14 years. As racially, ethnically and lifestyle diverse as the area it represents, the association dates to 1963, when it was formed to fight redevelopment efforts, protect the interests of the predominantly Black residents and successfully lobby to save many of the historic homes that had been scheduled for demolition.

Over the years, the OCNA helped prevent the I-880 (Nimitz) Freeway from continuing to bisect West Oakland after the earthquake-damaged Cypress Street Viaduct was demolished in the 1990s. The organization also led successful efforts to have Oak Center recognized as Oakland's largest Historic Preservation District in 2003. Today, the group aims to continue to maintain a safe residential community for homeowners and renters, organize outreach events and connect residents and business owners with city and county officials.

Taffet met the group during the process of submitting a proposal to buy his house from the city, which included plans to restore it back to its historical state. Back then, all neighborhood development design reviews came through the association. These days, it's not required, Taffet said, but developers still often present their plans to the group as a goodwill gesture.

The OCNA is much more than a homeowners' association, Taffet explained. It provides all members of the community the chance to voice their concerns, learn about issues impacting the neighborhood, meet their neighbors and dialogue directly with local officials.

"I enjoy running meetings and giving people the opportunity to speak, trying to get a handle on what they care about and working with the

city to address their issues when we can," Taffet said. "I love people and like engaging with them. We like working on a problem and trying to get a resolution."

The association's monthly meetings are usually attended by the councilmember representing the district or their community liaison, providing a forum for citizens to engage with the city and agencies like the Parks, Planning and Building and Public Works departments and the East Bay Municipal Utilities District, as well as developers.

The small but mighty group supports the West Oakland Environmental Indicators Project efforts to reduce air pollution from the Port of Oakland and has recently made strides with the city and Alameda County Environmental Health Department on cleanup of an abandoned gas station that had been leaking hydrocarbons and solvents into the soil. The association is advocating to have the building demolished and decontamination completed.

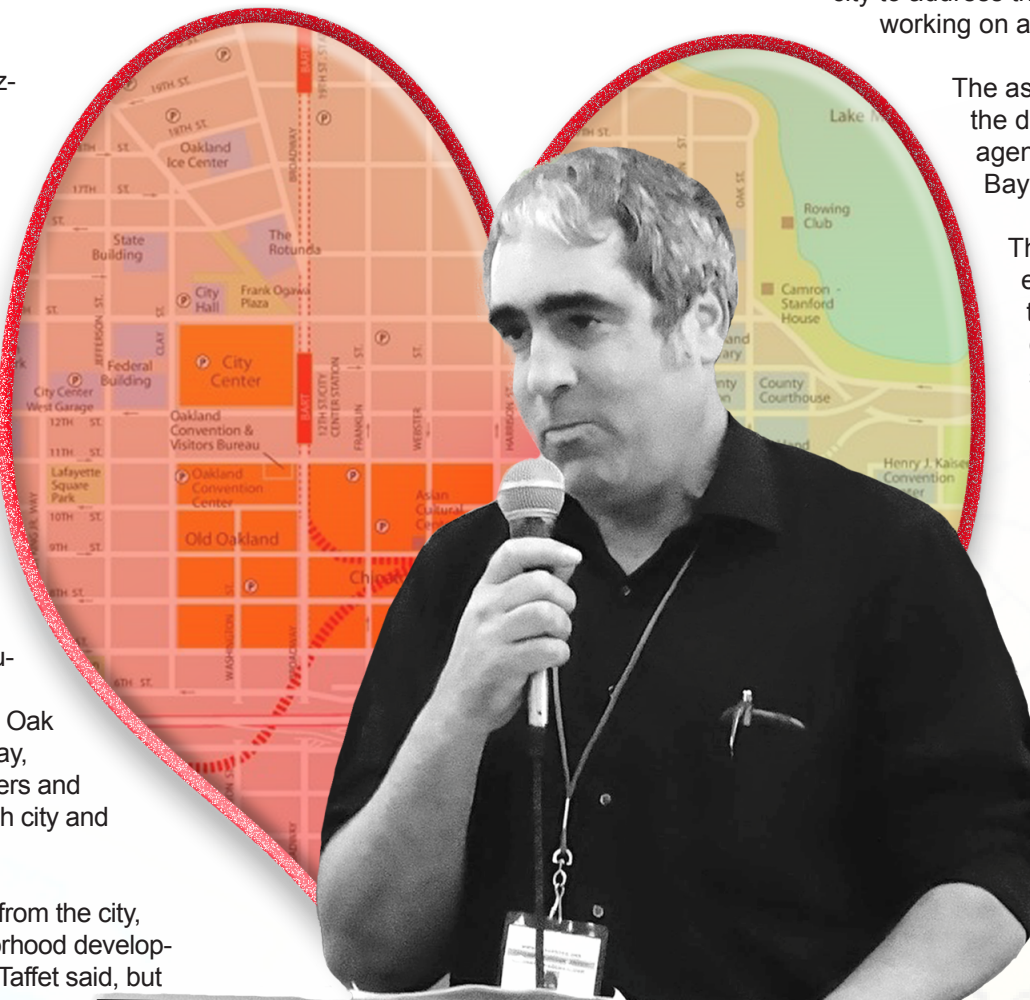
Like all neighborhoods, Oak Center has its issues — crime, homelessness, blight and gentrification chief among them — and at meetings, any issue that affects the quality of life in the neighborhood is up for grabs, Taffet said. Far from being a NIMBY (Not in My Backyard) group, Taffet explained, the OCNA tries its best to maintain a broad range of opinions.

"We're more pro-development if it helps reduce homelessness," Taffet says. "We've had a history of people maintaining homeowners' rights, but I try to have an even-keel approach; I believe that we have to have a heart about the need for low-income housing."

The group is working with the city council on impacts from the increasing number and size of homeless encampments, particularly along the Mandela Parkway that borders the neighborhood to the west. Taffet said he wants more help for the homeless through city and federal funding for tiny homes or other forms of temporary housing, as well as access to mental health services and more job training opportunities for youth. The OCNA also is getting the word out about COVID-19 vaccination opportunities.

As gentrification and housing-related issues continue to alter the makeup of the neighborhood, Taffet said the organization is dedicated to balancing preservation of Oak Center's cultural richness and heritage with the needs of the area's low and middle-income population.

"I would like to see that people aren't displaced," Taffet said. "That people can continue to live here without economic pressures or having houses sold out from under them. We want to maintain the current fiber of the neighborhood. I'd like to see it continue to get safer. I'd like to see the air continue to get better ... There are a lot of issues that need to be worked out. It's complicated, but we try to have as much compassion as possible. We want everybody to be heard."



For the last 14 years, LLNL hydrogeologist Mike Taffet has served as chairperson for the Oak Center Neighborhood Association, a group that provides West Oakland's Oak Center community the opportunity to voice concerns, learn about issues impacting the neighborhood, meet their neighbors and dialogue directly with local officials. Taffet runs the organization's monthly meetings, which are often attended by representatives from city and county agencies, developers and business owners.

## volunteer SPOTLIGHT

When Darlene Yazzie started working at the Lab in 1991, she wondered if she would meet anyone who shared her American Indian heritage.

Born in the Navajo Nation in northwestern New Mexico, Yazzie can speak, write and read fluently in the Navajo language.

"I am extremely proud to speak my language. English is my second language as I only knew Navajo when I first started grade school in Bloomfield, New Mexico," Yazzie recalls.

"When I came to the Laboratory, I wanted to participate in some social activities as well as meet and become friends with other Native Americans. At first, I felt like a lost Native American soul. I honestly thought to myself that 'there have to be other Native Americans here.'"

And there were.

The first LLNL employee that Yazzie met who was a Native American was the late James Johnson, who worked as an environmental scientist and was from the Choctaw Tribe.

Johnson told Yazzie that there once had been a Native American group at LLNL, so in 1993 the duo re-started the American Indian Activity Group (AIAG) under the auspices of the Lawrence Livermore Employee Services Association. Yazzie has served as the group's co-chair for the past 25 years.

During her leadership of the AIAG, Yazzie has brought WWII Navajo code talkers to LLNL and has devoted much time to aiding students in seeking STEM (science, technology, engineering and mathematics) careers.

In November 1995, Yazzie brought three Navajo code talkers (Jimmy Begay, Keith Little and Albert Smith) to LLNL and in November 2000, Yazzie had two other Navajo code talkers (Sam Billison and John Browne) visit.

Navajo code talkers took part in every assault the U.S. Marines conducted in the Pacific from 1942 to 1945 and served in all six Marine divisions, transmitting messages in their native Navajo language, a code that the Japanese never broke.

Yazzie, who works as a computer support technician for the Director's Office Cyber Security Program, has participated in about 20 American Indian Science and Engineering Society annual conferences around the nation, seeking to recruit American Indian college students for STEM jobs. She also founded the group, Soaring Eagles, to help interest middle and high school students in STEM.

Lab employees interested in joining the AIAG only need to have an interest in Native American cultural awareness and history and don't need to be Native American. Visit <https://diversity.llnl.gov/groups/aiag> for more information.

# Darlene Yazzie aids AMERICAN INDIAN COMMUNITY

By Steve Wampler



**Top:** Three Navajo code talkers visited LLNL during the November 1995 Native American Indian Heritage Month. They are pictured with members of the Lab's American Indian Activity Group during a special honors banquet for the code talkers. Shown from left are former LLNL employees James Johnson and Margaret Elliott, code talker Keith Little, former Lab employee Joanne Klemstein, code talker Jimmy Begaye, Darlene Yazzie, code talker Albert Smith and former Lab employee Susan Juno.

**Bottom:** Several LLNL Native American recruiters attended the 2017 American Indian Science and Engineering Society annual conference's career fair in Denver. Shown from left: Randy Pico, Darlene Yazzie, Dan Laney and former LLNL scientist Suzanne Singer.



# SpotLight

THE PEOPLE  
WHO DRIVE  
OUR SCIENCE  
& TECHNOLOGY



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